

COMPARISON OF DRUG TYPES IN INCIDENT REPORTS AMONG TEACHING HOSPITALS IN JAPAN

Hirose M¹, Egami K¹, Ohama K¹, Tsuda Y¹, Honda J¹, Shima H¹, Takemura T², Okamoto K³, Yoshihara H², Oh EH³

¹Saint Mary's Hospital, Kurume, Japan, ²Kyoto University Hospital, Kyoto, Japan, ³Hyupsung University, Hwaseong-Si, Gyeonggi-Do, South Korea

OBJECTIVES: Although incident reporting is very useful for securing patient safety, there are no previous studies comparing incident reports by extracting Drug Names from them. **METHODS:** We used 5,647 consecutive incident reports from Saint Mary's Hospital (SMH) and 2,816 reports from Shimane University Hospital (SUH) between April '06 and March '08, and 3,087 reports from Kyoto University Hospital (KUH) between March '04 and August '05. **RESULTS:** 1) The number of top five ranking reports at SMH are 279 (Central Nervous System drugs, 4.9%(279/5647)), 231 (Anti-diabetic drugs, 4.1%), 222 (Cardiovascular drugs, 3.9%), 127 (Anti-infective drugs, 2.2%) and 125 (Gastrointestinal drugs, 2.2%), in order. The numbers of those at KUH are 163 (CNS drugs, 5.3%), 130 (Cardiovascular drugs, 4.2%), 106 (Gastrointestinal and Anti-infective drugs, each 3.4%), and 89 (Anti-diabetic drugs, 2.9%), and the number of those at SUH are 244 (CNS drugs, 8.7%), 156 (Anti-diabetic drugs, 5.5%), 116 (Drugs affecting coagulation, 4.1%), 86 (Cardiovascular drugs, 3.1%), and 75 (Opiates, 2.7%). 2) CNS, Cardiovascular drugs are included in the top five ranking drugs at all three hospitals. Gastrointestinal and Anti-infective drugs are included at SMH and KUH in top five. 3) CNS drugs featured much more at SMH and KUH, resulting from the higher proportion of the elderly inpatients at SUH in rural than those at SMH or KUH in urban. 4) The numbers with Cardiovascular and Anti-diabetic drugs at all hospitals are huge, because Japanese patients are affected with cardiovascular disease and diabetes as adult lifestyle diseases. **CONCLUSIONS:** Different characteristics of the study areas might lead to these results. Further study should be conducted related with this topic. Furthermore, it would be very important for junior residents and new nursing staff to be taught with emphasis on the careful attention with the above drugs through residency and education programs have a higher tendency to be involved with errors.

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CONSUMERS' KNOWLEDGE OF GENERIC OTCs: A PHARMACIST INTERVENTION STUDY

Exaus CJ, Sangasubana N, Borja-Hart N, Alvarez G, Selagea AR, Rodriguez J, Rabionet S, Calderon JL

Nova Southeastern University College of Pharmacy, Fort Lauderdale, FL, USA

OBJECTIVES: To test the efficacy of pharmacist interventions to increase consumers' knowledge of generic Over-the-Counter (OTC) products. **METHODS:** A randomized-controlled post-test only design was used in a judgment sample of adults recruited from a university-affiliated pharmacy excluding employees and students. Subjects were randomized into: 1) an intervention group receiving a pharmacist-developed pamphlet utilizing FDA information about generic drugs; 2) an intervention group receiving a 5-minute pharmacist consultation about generic drugs with pamphlet reinforcement; and 3) a control group receiving neither intervention. Subjects completed a post-intervention 7-item True/False questionnaire testing their knowledge on product differences (2 items: price; physical appearance) and similarities (5 items: active ingredients; dosage form; safety; performance; quality) between generic and branded OTCs. A composite objective knowledge score (0-100) was calculated [(number of subjects' correct responses/7)x100]. Student's t-test, chi-square and analysis of variance ($p < 0.05$) were conducted to test the effects of the pharmacist interventions on consumers' knowledge. **RESULTS:** A sample of 157 subjects completed the study (pamphlet = 53; pharmacist consultation = 51; control = 53). Nearly 71% were female with the average age being 47.6 (S.D. = 17.7) years. The majority (45.2%) had some college education, 24.5% high school or less, and 29.3% completing college. There were no significant group differences in subjects' sociodemographic characteristics. The average objective knowledge score was 84.4 (S.D. = 23.8), i.e., pamphlet = 90.9; pharmacist = 92.2; control = 67.7. Subjects in both intervention groups scored significantly higher than in the control group. However, the knowledge score difference between those receiving pamphlet only and pharmacist consultation with pamphlet was not significant. **CONCLUSIONS:** The study's educational interventions, whether in the form of a written pamphlet or a combination of a verbal pharmacist consultation with pamphlet reinforcement, significantly increased consumers' knowledge of generic OTCs. These findings indicate the importance of pharmacist involvement and participation in both the design and implementation of written and verbal patient education of generic OTCs.

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CMS VS. NICE COVERAGE OF TECHNOLOGIES: HOW DO THEY COMPARE?

Kamae MS, Chambers JD, Neumann PJ

Tufts Medical Center, Boston, MA, USA

OBJECTIVES: The US Centers for Medicare and Medicaid Services (CMS) and the UK's National Institute for Health and Clinical Excellence (NICE) issue coverage decisions or guidances about medical technology. We compared the overlap in the technologies considered and the decisions/recommendations between the two agencies. **METHODS:** We reviewed all NCDs ($n = 138$) posted on the CMS website between 1999 through 2009 and all guidances ($n = 613$) posted on NICE's website since 1999. We included all types of NICE guidances, including cancer service guidances, clinical guidelines, interventional procedures, public health guidances, and technology

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appraisals. We compared CMS and NICE documents to determine overlap in the technologies considered and the consistency of the recommendations. **RESULTS:** Of 138 CMS NCDs, 58 pertained to technologies also evaluated by NICE. Medical procedures ($n = 14$) and medical devices ($n = 12$) were the most common overlapping technologies. Pharmaceuticals ($n = 3$) least frequently overlapped, in large part because Medicare rarely uses NCD for drugs. In terms of recommendations for overlapping technologies, 79% of NCDs and 93% of NICE guidances were favorable. 86% of overlapping technologies had the same direction of the recommendation, though there were some differences in the target population and other details. In the 8 "discrepant" decisions (where CMS and NICE recommendations disagreed), most often CMS issued a non-coverage decision while NICE supported the technology or allowed clinicians to use the technology with special arrangements. These include technologies such as screening computed tomography colonography for colorectal cancer and lumbar artificial disc replacement for the patients over sixty years of age. **CONCLUSIONS:** Less than half of the technologies that Medicare considered in NCDs were also evaluated in NICE guidances. Where the two agencies evaluated the same technologies, recommendations were mostly consistent. However, where there were disagreements, CMS tended to be more restrictive than NICE.

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ARE GOVERNMENT BASED REIMBURSEMENT PROGRAMS PERCEIVED BETTER OR WORSE COMPARED TO COMMERCIAL MANAGED CARE INSURANCE PAYERS BY PHARMACISTS?

Patel J, Goyal RK, Sangsiry S

University of Houston, Houston, TX, USA

OBJECTIVES: Reimbursement issues in Medicare Part D and Medicaid plans have been argued to cause financial instability in pharmacies. Is reimbursement amount and processing time different in the three major health insurance providers, namely Medicare part D, Medicaid and commercial managed care insurance payers? **METHODS:** A cross-sectional survey of pharmacists processing claims in independent pharmacies in the Houston metropolitan area was conducted using a 5-point Likert-scale questionnaire. Reimbursement rate was defined as the actual percentage of claimed amount received from insurance payers. Reimbursement processing time was defined as the number of days taken to receive reimbursement after claim adjudication. The questionnaire addressed issues with respect to adequacy and improvement of reimbursement rates and processing times across three insurance payers. Further satisfaction and whether pharmacists encountered cash-flow problems due to reimbursement issues was obtained. Descriptive analyses were conducted and the analysis of variance was performed, followed by Tukey's multiple comparison method to identify differences between payment sources. **RESULTS:** Pharmacists, in general, disagreed that the reimbursement rate and processing time were adequate in any of the three categorized payment processors. They perceived that the mean (SD) reimbursement rate from commercial managed care plans (2.05 (0.87), $p < 0.001$) was not adequate compared to Medicare Part D (2.6 (0.9)), and Medicaid plans (2.75 (0.95)). Pharmacists' perceived processing time was better in Medicaid plans (3.05 (1.04), $p < 0.001$) as compared to Medicare Part D (2.5 (0.98)), and commercial managed care plans (2.64 (0.87)). They were dissatisfied with the process of reimbursement which had created cash flow problems for their pharmacy and this perception was consistent across all payers. **CONCLUSIONS:** The reimbursement rate and the processing time for prescription drug claims were believed to be inadequate in all three payment processors. Government programs were perceived to be better as compared to commercial managed care insurance programs.

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LISTING AND REIMBURSEMENT OF NEW DRUGS IN NATIONAL HEALTH INSURANCE—AN EMPIRICAL EXPERIENCE OF TAIWAN

Huang WF¹, Hsieh CF¹, Chen GT²

¹Institute of Health & Welfare Policy, National Yang-Ming University, Taipei, Taiwan,

²Koo Foundation Sun Yat-Sen Cancer Center, Taipei, Taiwan

OBJECTIVES: We aim to present the empirical experience of new drug listing and reimbursement under Taiwan's National Health Insurance (NHI), and to analyze the performance of such mechanism. We also attempt to assess its impact to the research-based pharmaceutical company and the public access to pharmaceutical innovations. **METHODS:** The materials are based on the documentation of Taiwan's NHI Drug Review Committee (DRC) over 11 years period (1996-2006). We defined the criteria of pricing methods into 9 categories: International Price Comparison, Comparison with Similar Products with Equivalent Therapeutic Effects, Price Proportion Method, Price Addition, Orphan Drugs, The Lowest Available International Price, Cost Analysis, Grouping and Others. **RESULTS:** The total number of new drugs that applied for NHI listing and reimbursement during 1996-2006 was 787, and the number of petition cases was 325(41%). The total number of new drugs with final pricing decisions in this study was 566. Among them, 298 items were issued with reimbursement price without petition, and the remaining 268 new drugs received their reimbursement prices after petition on initial pricing decisions. The approved price was averaged 74% of the international median prices, and was only 65% of international median prices among petition cases. The top three methods of pricing are Price Proportion Method (37.1%), Equivalent Therapeutic Effect with Similar Product (23.5%), and International Price Comparison (14.7%). Although NHI continues to facing financial crisis in the past 10 years, the price of reimbursement remained approximately 71% of their respective application prices during all the period. **CONCLUSIONS:** The policy direction of NHI pricing and reimbursement is to ensure that resources serve the highest priorities of the population's health needs in an efficient way. It is worthwhile to